



Appeal Against Condition Attached to Revised Fire Safety Certificate (19/RFSC/S/1283)

Project	Dunnes Stores – Cold Room Extension, Bandon Road, Bishopstown, Cork
Local Authority	Cork County Council
Date	27 th January 2020

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1.0 INTRODUCTION

The project involves the extension of an existing retail building to provide a cold room at Dunnes Stores, Bandon Road, Bishopstown, Co. Cork.

A Revised Fire Safety Certificate application for the works was granted on the 6th of November 2019, which was subject to five conditions.

The appellant wishes to appeal Condition 2 of the Fire Safety Certificate grant, which refers to the following:

Condition 2

The proposed L1 fire detection and alarm system in the building shall include the provision of a Type V1 Voice Alarm System in accordance with BS5839-8: 2013 throughout the retail areas.

Reason

To ensure compliance with Part B1 of the Second Schedule to the Building Regulations 1997 to 2006.

2.0 INFORMATION REVIEWED

In assessing this appeal, the following information was considered:

- Revised Fire Safety Certificate application including report and drawings received.
- Appeal submission from Michael Slattery Associates (MSA) dated 29th November 2019.
- Fire Officers Report on Fire Safety Certificate appeal dated 18th December 2019.
- Fire Safety Certificate grant letter (Ref: 19/RFSC/S/1283) dated 6th November 2019.

3.0 DISCUSSION

Condition 2

The proposed L1 fire detection and alarm system in the building shall include the provision of a Type V1 Voice Alarm System in accordance with BS5839-8: 2013 throughout the retail areas.

Reason

To ensure compliance with Part B1 of the Second Schedule to the Building Regulations 1997 to 2006 Section B1 Means of Escape in Case of Fire.

BCA's Case

The BCA noted that the travel distances exceed the maximum allowable travel distances, which was extended by the provision of an automatic fire detection and alarm system and increased ceiling height, as per Clause 16.4 BS9999: 2017. Taking this into regard, a type V1 Voice Alarm System is required to compensate for the increased travel distances.

Appellant's Case

Michael Slattery Associates (MSA) note that, as recommended by BS 9999: 2017, a Type V1 Voice Alarm system is only required in the following situations/buildings:

- Where a building is designed for phased evacuation – while Dunnes Stores unit is designed for simultaneous evacuation.
- In some specific building types containing atria - while the Dunnes Stores unit does not contain an atrium.
- In a shopping centre – while the Dunnes Stores unit is a standalone building with no interface with other retail units or a mall.

Additionally, the standard of fire detection and alarm is that of an L1 system, which is above the required in BS 9999: 2017 which states Type M for a B2 risk profile building.

MSA also briefly mention the provision of the AOVs at roof level throughout the retail space which aids smoke clearance within the retail space. Although only an additional 5% variation has been considered for the travel distance due to ceiling height, the provision of smoke ventilation could justify the extended travel distance. Furthermore, the quick response sprinkler heads located at ceiling level and ordinary response sprinkler heads in ceiling voids help aid escape.

Discussion

As the building has a risk profile of B2, the minimum level of fire detection and fire alarm systems for the building is that of Type M (Manual). The alarm and detection system provided in the building is an L1 system, which is above the requirements.

As per BS 9999: 2017 Table 11, the allowable travel distance for a building with a B2 risk profile is 50m in two directions, and 20m in a single direction. However, as per section 18.2 BS 9999: 2017, where there is a clear benefit resulting from the addition of an automatic fire detection and fire alarm system, a 15% increase in allowable travel distance may be applied. This section also states that incorporating a voice alarm into the automatic fire detection and fire alarm system provides a clear benefit. Additionally, as per Table 14 of BS 9999: 2017, and as the ceiling height is between 3m and 4m, the travel distance can be extended by a further 5%. This allows for a maximum travel distance of 60m in two directions and 24m in one direction.

It is unclear where the specific extended travel distances of 65m are located and MSA haven't highlighted the areas in question. I have identified areas where there are travel distances up to 63m (the south-eastern corner of the main retail area).

MSA mention that should an ASET/RSET analysis be carried out it would likely show that the provision of automatic smoke venting could allow a variation of up to 30% to the travel distances. However, this analysis was not provided as part of the Appeal submission.

It should be noted that Table 7 of BS 9999: 2017 permits the 15% variation on travel distance when an automatic fire detection and alarm system. Therefore, the provision of an L1 standard fire detection and alarm system, as opposed to an L2/L3 system, is considered a benefit. An L1 standard is the highest standard of fire


detection and provides occupants with immediate notification of a fire event. The presence of the L1 standard fire detection and alarm system is considered a reasonable compensatory measure for the extended travel distance of 3m.

As noted in the MSA Compliance Report, the existing building and the proposed extension has been assessed with BS 9999:2017 which does not require smoke clearance at roof level. The provision of AOVs at roof level allow for the release of any smoke build up with the retail area and also increase the height of any smoke layer. Similar to increased ceiling heights, a reduction of the descending smoke layer allows additional time for occupants to escape before potential smoke impedes on their means of escape. Therefore, the presence of a smoke clearance system is also considered a reasonable compensatory measure for the extended travel distance of 3m.

The travel distance is only extended by less than 5% of the maximum permitted value of 60m, and there are fire safety measures present that can compensate for this extension. Therefore, the Type V1 Voice Alarm system is not considered necessary to compensate for extended travel distances.

4.0 RECOMMENDATIONS

The BCA should be directed to grant the Revised Fire Safety Certificate Grant without Condition 2.

Signed 
Martin Davidson
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Date: 27th March 2020

